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# TRAFFIC SPEED REPORT NO. 105

J. F. McLaughlin, Director T0:

Joint Highway Research Project

July 26, 1978

File: 8-3-3

FROM:

H. L. Michael, Associate Director

Joint Highway Research Project

Project: C-36-10C

The attached Progress Report No. 105 on Traffic Speeds is the report of the April-June, 1978 quarterly study of free-flowing automobile and truck speeds on rural, tangent, level sections of Interstate, 4-lane and 2-lane and on urban interstate highways in Indiana. The report has been prepared by Mr. J. R. Mekemson, a Graduate Instructor in Research on our staff, under the direction of Professor H. L. Michael. The data collection was directed by Mr. G. K. Stafford of our staff.

The results indicate that the average speeds of passenger cars and trucks have changed little since the January-March 1978 study. The average speed of passenger cars has fallen 0.6 mph, while the average speed of heavy trucks rose only 0.1 mph when compared to the previous period. The percentage of all vehicles travelling more than 5 mph above the speed limit decreased to 31.1 percent, while 8.3 percent were more than 10 mph above the speed limit, a decrease of 1.7 percent.

Copies of the report will be sent to the Federal Highway Administration and the ISHC for review, comment and acceptance as partial fulfillment of the objectives of this HPR Part I Study. Copies of the report are requested for release to the Indiana State Police and the Indiana Office of Traffic Safety as a normal procedure for these reports.

Respectfully submitted,

Harold L. Michael Associate Director

Hawlol I Meshael

HLM:ms

cc: A. G. Altschaeffl

W. L. Dolch R. L. Eskew G. D. Gibson W. H. Goetz

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Interim Report

TRAFFIC SPEED REPORT NO. 105

bу

J. R. Mekemson Graduate Instructor in Research

and

G. K. Stafford Traffic Engineering Technician

Joint Highway Research Project

Project No.: C-36-10C

File No.: 8-3-3

Prepared as Part of an Investigation Conducted by

Joint Highway Research Project Engineering Experiment Station Purdue University

in Cooperation with the Indiana State Highway Commission and the

U.S. Department of Transportation Federal Highway Administration

The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the Federal Highway Administration

Purdue University West Lafayette, Indiana July 26, 1978

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# TRAFFIC SPEED REPORT NO. 105

This report is an analysis of spot speed observations made during April-June 1978. All observations were made of free-flowing vehicles on level, tangent sections of rural and urban highways during daylight and under favorable conditions.

The speed monitoring stations for each highway classification are divided into two groups. The first group is identified as "control stations" and were at the same locations on selected Federal and State highways as used in previous annual studies. These "control stations" are used in each quarterly study. The second group is selected at random for each quarterly study.

Fourteen speed monitoring stations were used for the study reported herein. Seven of these stations were the control stations noted above. The other seven stations were selected at random.

Stations were classified as two-lane, four-lane, rural interstate, or urban interstate highways. A representative sample of spot speeds was obtained at each station in each classification. The site locations were as follows: (See Figure A).

	Rural Interstate Highways
**RI-6 (I-65)	7.5 miles north of junction of SR 160
**RI-21 (I-69)	1.6 miles south of junction of SR 18
RI-13 (I-70)	.25 miles east of Vigo-Clay Co. Line
RI-14 (I-69)	3.45 miles north of SR 238
	Four-Lane Highway
*4L-17 (US 52)	Just east of Co. Rd. 475W, near Klondike
*4L-32 (US 30)	2.9 miles west of Wanatah city limit sign
4L-14 (US 40)	2.3 miles east of Greenfield
4L-31 (US 30)	2.4 miles east of SR 421
	Two-Lane Highway
*2L-18 (US 35)	2.5 miles east of junction of I-69
*2L-54 (US 231)	1.1 miles south of junction of SR 234
2L-30 (US 52)	12 miles east of New Palestine

3.35 miles north of the Toll Road

2L-46 (US 421)

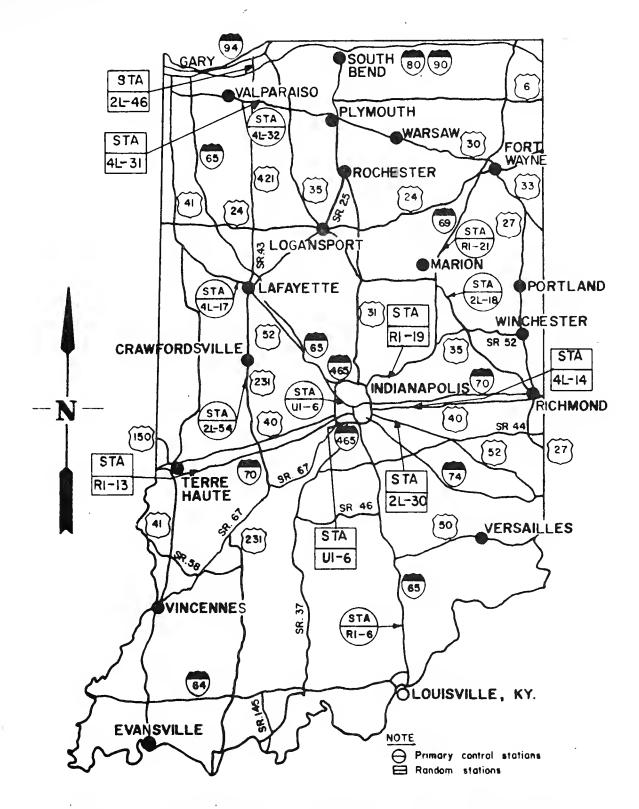


FIGURE A. LOCATIONS OF SPEED-STUDY STATIONS

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# Urban Interstate Highways

\*UI-6 (I-65)

East of White River Bridge

UI-4 (I-65)

1.5 miles east of Mann Road

The vehicles were classified as Indiana or Non-Indiana Passenger Cars and Light (less than 5000 lbs. gross weight) or Heavy (equal to or more than 5000 lbs. gross weight) Trucks. The analysis was performed as classified and combined, passenger cars or trucks.

The maximum speed limit in Indiana is 55 miles per hour, both on Interstate and other rural highways.

### Equipment and Field Procedure

The observations for this study were obtained by use of a Radar Speed Meter. The meter was located in a van type vehicle parked as a disabled vehicle on the right shoulder or as a normally parked vehicle in an access driveway to the road. The van was equipped with one-way vision windows on the rear and side facing traffic so that approaching vehicles could not observe the speed measurement process. The ovservers were also equipped with CB radio equipment so as to monitor possible radio notification of the speed measurement and of police vehicles in the area. When any such incidents occurred speeds were not taken for at least a following 15 minute period. Such periods rarely occurred. There was rarely indication, in fact, that motorists were ever aware of the presence of a speed measuring station while it was in operation.

The speed was measured at a distance from the van so that the angle of measurement with the highway center line was always less than  $10^{\circ}$ . No corrections of speeds were necessary at these small angles. At the beginning of the study the accuracy of the meter was checked and any constant discrepancy of readings was corrected accordingly.

<sup>\*</sup>Control Stations

<sup>\*\*</sup>Control Stations location slightly moved due to construction.
See Tables for these locations.



# RESULTS OF ANALYSIS

The data collected were analyzed and are summarized in Table 1 to 14 in the Appendix. Tables 15, 16, 17 and 18 summarize the data for rural interstate, four-lane, two-lane and urban interstate highways, respectively. Table 19 is the summary for all highways. Tables 20 through 34 are summarizes in an FHWA format which is desired.

The average speed for each classification of vehicles on each type of highway for this study was as follows:

Interstate		Other Four lane	Two Lane
Urban	Rural	Rural	Rural
59.2	60.5	57.8	56.6
57.9	60.5	58.2	57.5
59.1	60.5	57.6	56.8
62.7	64.9	62.2	61.6
58.4	59.3	57.2	55.3
57.7	60.0	57.9	54.9
58.6	60.2	57.6	56.1
62.7	64.7	62.4	61.6
	Urban  59.2 57.9 59.1 62.7  58.4 57.7	59.2 60.5 57.9 60.5 59.1 60.5 62.7 64.9 58.4 59.3 57.7 60.0	Interstate         Four Lane           Urban         Rural           59.2         60.5           57.9         60.5           59.1         60.5           62.7         64.9           58.4         59.3           57.7         60.0           57.9           58.6         60.2           57.6

The percent of vehicles exceeding the speed limit (55 mph) for each classification of vehicle and each type of highway was as follows:

Interstate				
	<u>Urban</u>	<u>Rural</u>	Four Lane	Two Lane
Passenger Cars:				
Indiana	81.8	87.3	65.5	57.4
Non-Indiana	70.7	84.7	70.9	65.6
All Passenger Cars	80.2	86.3	66.4	58.9
Trucks:				
Less than 5000 lbs.	75.9	77.7	63.1	48.7
5000 lbs. or more	72.6	84.3	70.8	47.6
All Vehicles:	77.6	84.6	67.0	54.4

The percent of vehicles traveling more than 5 mph above the speed limit (exceeding 60 mph) for each case was as follows:

	Interstate		<u>Other</u> Four Lane	Two Lane
	Urban	Rural	Rural	Rural
Passenger Cars:				
Indiana	36.4	46.2	24.9	22.1
Non-Indiana	30.7	44.8	26.7	23.4
All Passenger Cars	35.6	45.7	25.2	22.4
Trucks:				
Less than 5000 lbs.	34.6	38.0	27.8	18.0
5000 lbs. or more	25.5	45.5	32.8	13.4
All Vehicles:	33.0	44.6	27.7	19.7

The percent of vehicles traveling more than 10 miles per hour above the speed limit (exceeding 65 mph) for each case was as follows:

	Inte	rstate	<u>Other</u> Four Lane	Two Lane
	Urban	Rural	Rural	Rural
Passenger Cars:				
Indiana	8.8	15.2	6.8	6.1
Non-Indiana	4.0	13.6	4.2	7.8
All Passenger Cars	8.1	14.6	6.4	6.4
Trucks:				
Less than 5000 lbs.	5.6	12.8	6.1	5.3
5000 lbs. or more	3.8	12.2	5.9	3.6
All Vehicles:	6.6	13.7	6.2	5.6



### Summary and Conclusions

The overall average speeds for all vehicles and for all passenger cars in this study were found to be 58.1 mph and 59.4 mph, respectively. The overall average speeds for heavy trucks and and for all trucks were found to be 57.9 mph and 57.6 respectively. These overall speeds show little change from the results of the April-June 1977 quarter. Average speeds also changed only slightly when compared to the previous quarter, 0.3 mph less for all vehicles and 0.6 mph less for all passenger cars. For heavy trucks, the average speed was 0.1 mph more, while the average speed for all trucks did not change.

Table A presents a comparison of the overall speed results with that of the previous two studies. The 85th percentiles and the average speeds have decreased slightly when compared to the previous January-March 1978 study.

A comparison of April-June 1978 speed data with that for other recent periods for several types of highways for passenger cars and trucks is shown in Tables B, C, D, and E. Speeds were similar to the last quarter on all highway types for both passengar cars and trucks with a slight decrease in almost all speed cateogires.

TABLE A

COMPARSION OF THE OVERALL SPEED RESULTS

	April-June 1978	JanMarch 1978	OctDec. 1977	July-Sept. 1977
Average				
All Passenger Cars	58.4	59.0	59.3	57.8
Heavy Trucks	57.9	57.8	58.2	57.4
All Trucks	57.6	57.6	58.1	57.0
85 Percentile				
All Passenger Cars	63.1	63.8	64.0	62.6
Heavy Trucks	62.7	62.9	63.4	62.5
All Trucks	62.7	62.8	63.3	62.3
15 Percentile				
Heavy Trucks	52.1	51.8	52.0	51.1

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TABLE B

AVERAGE SPEEDS ON INTERSTATE HIGHWAYS (URBAN)

	April-June 1978	JanMarch 1978	OctDec. 1977	July-Sept. 1977
Passenger Cars:				
Indiana	59.2	59.7	59.8	58.7
Non-Indiana	57.9	61.2	59.0	59.0
All Passenger Cars	59.1	59.9	59.7	58.8
85 Percentile (all)	62.9	63.9	63.8	62.7
Trucks:				
Less than 5000 lbs.	58.4	58.3	59.1	57.7
5000 lbs. or more	57.7	58.4	56.6	58.2

TABLE C

AVERAGE SPEEDS ON INTERSTATE HIGHWAYS (RURAL)

	April-June 1978	JanMarch 1978	OctDec. 1977	July-Sept 1977
Passenger Cars:				
Indiana	60.5	61.0	61.2	60.1
Non-Indiana	60.5	61.4	61.8	60.1
All Passenger Cars	60.5	61.1	61.5	60.1
85 Percentile (all)	64.9	65.9	66.1	64.5
Trucks:				
Less than 5000 lbs.	59.3	59.8	60.1	58.4
5000 lbs. or more	60.0	59.8	61.3	59.7

TABLE D

AVERAGE SPEEDS ON OTHER FOUR-LANE HIGHWAYS

	April-June 1978	JanMarch 1978	OctDec. 1977	July-Sept. 1977
Passenger Cars:				
Indiana	57.5	58.0	58.4	57.0
Non-Indiana	58.2	60.2	59.6	58.1
All Passenger Cars	57.6	58.2	58.6	57.2
85 Percentile (all)	62.2	62.7	62.9	62.0
Trucks:				
Less than 5000 lbs.	57.2	57.3	57.5	55.7
5000 lbs. or more	57.9	57.6	57.8	56.6

TABLE E
AVERAGE SPEEDS ON TWO-LANE HIGHWAYS

	April-June 1978	JanMarch 1978	OctDec. 1977	July-Sept. 1977
Passenger Cars:				
Indiana	56.5	57.2	57.7	55.9
Non-Indiana	57.5	58.9	58.4	55.9
All Passenger Cars	56.8	57.3	57.8	55.9
85 Percentile (all)	61.6	62.3	63.0	60.9
Trucks:				
Less than 5000 lbs.	55.3	55.5	56.7	54.9
5000 lbs. or more	54.9	54.4	54.7	53.5



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OF LANES - 4	_	YPE 0	15_PM		RES- FNT	234	9 = 0	001		0	0	0	28	6	mi	4-1	N	01	99.	1001	100		12	60-1		10	61-15
TION	н I 6н	1	TION 1=78 1:05	¥.	S	1 1	_ i	0	0	0	0	0	0	0	0	0	0		İ	į			0	0		0	
TIOUSIER TO TENT TO TE	13	4	BSERVATE_5		Z	HICLE	MPH)	IATIO	710 E13	1 D	W W	JE 7	9 MP	4 MP	9 MP	A B 5	9 MP	4 MP	9 MP	W 5	E 6	B	HICLE	0	B	HICLES	
S Z III IZIAIN D T Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	AT ION R I	. OF LANE	H		OBSFRVAT	MBER OF V	E. SPEED	ANDARD DE				ERCENT	-	EHICLES	RAVELING _	T 0R	ESS THAN					RECTION	MBER OF V	ERAGE SPE	RECTION	MBER OF Y	ERAGE SPE

STATION_RI-19	HIGHWAY	<u>9-1-</u>	9	LOCA	LOCATION_3	.45_mil	es_nort	th of SR	238			!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
NO. OF LANES_4	1	TYPE OF	SURFAC	EConcr	rete	1 1		3	EATHER	Partly.	Cloudy.	
THIS OBSERV	≪ r∪t∈	7.61	12		LA	ST PREV	10US 0B	SERVATIO	N (SPE	ED REPOR	T NO. 1	04-)
.i Σ Ψ	0:40 -	11:20 A	M SB M			E			 	1		
		Ad	SSENGER	CARS	1 (	1			TRUC	<u> </u>	1 1	
	J. W.		IONI		NON	NDIANA	<b>V</b>		500	O LBS	>5000	0_LBS.
		PRES-		$\simeq$		٥		PR		۵		٥
OB SERVATION	LAS	ZI Wi	LAST		LAST	ENT	LAST		LAST	ENT	LAST	FINE
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AVE. SPEED (MPH)		0.2	0	0	0	0	O		0	0	C	9.3
STANDARD DEVIATIO	0	679-7	0	4.372	0	22	0	\$ 65	0	O	0	4. 521
HdW 72			0		0		O	- 1	0	- (	O	
29 MP	0			C	0	0	0	0	0	0	0	
34 MPH	0	0			0		0	D	0	0	0	0
39 MPH	0	0	0		0	0		0	0	0	0	0
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ING 59 M		47	0	47 = 1	0	~	Ö	001	0	mi	0	0
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THAN 69 MP	. (	97.	0	7	0	9	0	25	0	S	0	001
74 MP	0	0	0		0	98.1		•1			0	100.0
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DIRECTION NB		. 6 . 6		- 1		j		1	1 1		1	
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# TABLE\_5\_SPEED DATA

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HIGHWAY		ATION -19-78 2:13 1:07 AM	V V	AS	180	26#2U	0	1			•	2	7	<u>6</u> 9	92=	<b>*</b> 76	200	000	000	100-0	1 1	76	57.60	-	86	i
-32	s4	OBSERVA DATE 5		NO	HICLES	LMPH2 VIATION	I	9 FI FI FI FI FI FI FI FI FI FI FI FI FI	JW 7	9 MPH	E	E	4-MP	9 MP	Σ  7	9 MP	4 BP	9 3P	JW 5	P P	В	HICLES	0	В 	HICLES	<del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del> <del>-</del>
STATION4E	NO. OF LANES	THIS		OBSERVAI	NUMBEROFIN	STANDARD DEV	;		İ		ERCENT	0 F	EHICLES _	RAVELING	OR	THAN		i			DIRECTION	NUMBER OF V	AVERAGE SPE	DIRECTION	NUMBER OF X	AVERAGE_SPE

### TABLE\_\_7\_SPEED DATA

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s east o		1008 088			LAST		0-1-1	0	0	0	٥	0	0	0	0		0	0	0	0	0	0		٥	0		0	0
3 mile	1	ST PREVIDATE		PRES	ΞŪ.	2	-56.27.		0	0	0	0	0	7-7-		-	αú	9		0	0						1	-56-27
I -	<u>a]t</u>	LA M EB	1 1		LAST		O	0	0	0	0	0	0	0	0		0	0	0	0	0	0		0	0	0 0 0	0	0
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40	OF SURFA	2:37	PASSENGE	21 21	LAST		0		0	•	0	0		Ö		0	0	0	O	0		0		0	0		0	
۲ <u>. us</u>	TYPE (	6-6-78 1:40 PM		PRES-	·	201	OCI	5.5				0	•		4	4	91-0	<u>~</u> 1	99	000	00	0	1 1		55.9		<b>-</b>	-57.68
		VATION 6-5-78- 1:05-73- 1:00 AM			LAST		1			0	0	0	0	0	0	0	0	0		0	0	0						0
114	ANES4	IS OBSER DATE TIME			ATION		D_(MPH)_	DEVIATION	24 MPH	29 MP	34 MP	39 MP	W 77	49 MP	54 MP	59 MP	A P	69 MP	74 MP	91 91	84 MP	80	EB	VEHICLE	PEED	3	VEHICLE	PEE
ATION_	NO. OF LA	¥			OBSER	NUMBER	AVE SPE	TANDARD					PERCENT		w	RAVELI	-	LESS THAN					1 RECIIO	NUMBER	AVERAGE	DIRECTION	NUMBER	AVERAGE



1		.104_)	1	5000 LBS.	PRE	Z.	17	M	4 9	] ·	0	0	0		0 2.2	11.	50	7	•		0	<u>0</u>	0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	105	59			29.0
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t of SR 421	WEATH	BSERVATION (SP	1 04	< > < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < < < > < < > < < > < < > < < > < < > < < > < < > < < > < < > < <  <	PRES-	NT	238	59.20	4.823	0				) (	3.4	2	<b>₩</b>	7		6	이	o	0		127	59.24		111	52=15
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LOCATION_2	Concrete	LAS	ARS	N N N N N N N N N N N N N N N N N N N	ES+	ш	139		76	1	0	٥	0		5.8	2 - 3	6	2	00	0	0	0		) i	61	. 75		780	
30	OF SURFACE_	A VB	NGER		٥	LASI	0		7 0		0	0	0		O	0	0	0	6 0	0.1	0	0							7502
HIGHWAY US	TYPE	110N 4-78 3511:50-A 001:32 PM			1	LASI	0 19	0 58.2	4.7	0		0	0 0	0 1 0	7	18	61	95	99	100.	0_100	0 100	0_100		6 0	0	i i i i i i i i i i i i i i i i i i i	-0	57-
STATION4L=31	NO. OF LANES4	THIS OBSERVATORINE 10:				OBSERVATION-	OF VEHICLES	AVE. SPEED (MPH)	TANDARD DEVIATIO	24 MP	29 MP	34 MP	39 MP	RCENT 44 MP	F 64	EHICLES 54 MP	VELING 59 MP	9 E	ESS THAN 69 MP	74 MP	79 MP	84 MP	8	IRECTION EB	NUMBER OF VEHICLES	0	DIRECTION - WB	NUMBERLOFLYE	<u>average spee</u>



#### TABLE\_\_9\_SPEED DATA

04.)	10	
RT NO. 1		
Cloudy ED REPO		
WEATHER ON (SPE		
of 1-69		
S_east		
ST PREV DATE	N	
ocation_2 Asphalt		
L OC	NI	
35F SURFA	N	
HIGHWAY_US_ TYPE 0 ON 78 		
A T I A I I DO :		
18 S-2 OBSERV DATE_6 TIME11		
STATÍON2L NO. OF LANE THIS	P E R C E N T R P E E L L L E S S S S S S S S S S S S S S	

### TABLE\_10\_SPEED DATA

STATION21	54	н І бн	НІ 6Н М А Ү <u>US_ 23</u> ]	231	1007	OCATION_1	mile s	outh of	SR 234				
NO. OF LANI	ES2	1	TYPE 0	F SURFAC	E_Asphal	alt	1 1	 		WEATHER	Partly	Cloudy	1 1 1 1
TH1	S OBSERVA DATE_5	AT 10N 5-11-78 10:00 AM	- 12:50	<u>PM</u> 00		LA	ST PREV DATE TIME	10 LS 088 3-6-78 12:22	ERVATI	ON (SPER	ED REPOR	T NO. 1	04_)
	1	~		ASSENGE		1 1	 	1 1 1	1 1 5 5	TRUC	KS		
	1	ALL		IONI	1 10	I I I I I I I I I I I I I I I I I I I	NOIANA	A	LL PRFS-	500		>5000	LBS. PRES-
OBSERVA	z	LAST	ENT	LAST	Z	LAS	·	LAST	<u>u</u>		Ш	S	띠
UMBEROF	311	241	125	216	19	2	121	19	202	0	_ 29	1-1	13
AVE. SPEED	1:	55.70	25 7 2 3	-55.60-	57.59	-56.30-	57.24	52.00	56-03	200		55.50	
TANDARD - D	ALCA		2555 0		0	14 	비	61 41 •1	2	コラマ	010	0  0  •	1
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	F				0					0	0	0	0
	MPH	) •  	0		0	0	0	0		- 1	1.3		4
CENT	A P H	5.0	•	5	-!	4.0-		4-6-	100	3.	. 0	0	15
0 F	AP H	10.8	6.8	11			0				15.2	mi	12.3.
ICLES	MPH	38.6	<b>₩</b>	30	5	4 5	5	-1	9	0		<b>←</b> I	3
VELING	MPH	78.8	4-19-	- 79 *	7	76.0		14 = 5-	S)	ol Ol	- al	oj	역 001 ·
O.R.	FILE	94-6-	91.0	-25=	7:0	100 100 100	92=	2	13	2	7:	9	9
S THAN	MPH	2000	-97-	-28	7.	000		•i	• 1∞	5	9	6	이
	RPH	100-0-	-22 ± 1	1001	6	400 000	00	900	8	278	   	0	
	MPH	100-0-	99.	100=	9	ő	0	-1 OI	OI:	ď.			
	APH IAPH	100.0	96	100=0	99	000	ol Ol	000	90		ال	9	-
1 1 1	MPH	0	100-0	100-0	0	000	0	00 00	4 00 00	<u>00</u>	0	9	0 0
DIRECTION	1	- 1 1 1	- 1	1		1 1 1		- !	- 1				
NUMBEROF	1ICLES	_110_	108	102	6111	1	i	10		į	39	- 1	i
AVERAGE SP		56-00-	58.60	_55.20	58.79	57.40	-52.23-	55.20	56.5	27.00	j	54-8	
IRECTION-	1	8 8 -	1	0 0					- 10				
NUMBER OF	HICLES	131		- 1	į.	i	1	11	1	- 10	- 14	1.	701
VERAGE_SP	0	40-	1	_55.3			- ·		55.4				77

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### TABLE\_JJ\_\_SPEED DATA

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R Sunny		01	I	12	# OC	-1 ( 3) ( 4) (	O	0	8	2	• ∞0	2	-1	ا ا•	<b>4</b>	100		0 100 0	اه اد		0_53.69	9	0 55 34
f New Palesti  WEATHE SERVATION (SP		LL	Ш	177	53.79	01	0	0	1-1-				4			Э ()	[-] [	100 0	9	100	53.11	6	54-42
es_east_o  Evious_ob	ATEIME	NA AI	NILLLASI	50_	210-		0	0	0	_0	-0	- :		0-				0		3		2	
10N-12_mi t		NON-INDIA	<b>LU </b> 		ુ•! ⊂	)    -		0	0	0	O	O	oi	0	O	0	Oli	0 100	)	1	0	1	61
LOCATION FACE ASPhalt.	6			2	0-56-21			0	7-7	03 + 1		2	7	6	6	98	- 66	0 00 00	- 707	0134	56-7	12	055-60
HIGHWAY_US_52	2:35 PM -	ZI	ENT LAS	266	-23			1 1	-4	-0-	4.3	9-1	7.0	2 * 1	7.2	8.9	<u> </u>	0.00	ロュレー・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・	137	~	12	5.68
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C	DATE_ TIME_		VAILON	E_VEHICLE	D (MPH)	HUM 72	29 MP	E	32 MP	44 MP	49 MP	24 B	6 -59 MP	21	PI P	ار ا ا	A L	E  3	7E-707-1		EED		SPEED
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### TABLE\_12\_SPEED DATA

### TABLE\_13\_\_SPEED DATA

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91 0	OBSERV, DATE_5 TIME_2		н
STATIONUI	IHI	NEW TOTAL TO	1, 10, 11, 11, 11, 11, 11, 11, 11, 11, 1

			-

### TABLE\_14\_SPEED DATA

STATION _UI=4	HIGHWAY	1-46	5	LOCATION		5 miles	east	of Mann'	Road			
NO. OF LANES6		TYPE OF	SURFACE	Conc	rete	6 5 5 5 5	i 6 6 6	3	EATHER_	Sunny	•	•
E R L	131	6 62 6 6 6 1	 		LAS	ST PREVI	0 US 0B	SERVATIO	N (SPEE	D REPOR	1 NO. 10	4_)
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OBSERVATION	LASI	Zi UI I	LAST	ZI	LAST		LASI	21	LASI	zi	-LASI	21
UMBER OF VE		7-	- 1	4	0	7	وا	23			0	113
AVE. SPEED (MPH)	i	58.2	20	9.0	0	Ø	0-1-1	C	0	58.30	C	01
DEVIALIO		4-743	04	4884	0	4-192	0	73	0	21	0	2
24 MPH	0	(	0	(	0	(	0	1	0		0	
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9 S	i	100-	Ü	9	0	0	0	00	0	00	0	ef
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AVERAGE SPEED	0	52.6	0	59.21	0	-59.27	0	-57.70-	0	58.0	0	
MINE CALLES		111	-			21		115				
VERAGE SPEED	0	58.42	0	58.53		57.95		58,51		58.58		58-47
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STATION_RIALL	NO. OF LANES	THIS OBSERVAT DATE_APT	**			OBSERVATION	NUMBER OF VEHIC	AVE. SPEED (MPH)	STANDARD DEVIATI	24_MP	29 MP	34 MP	39 MP	ERCENT 44 M	4 65 MP	HICLES 54 MP	RAVELING 59 MP	94-MP	SS THAN 69 MP	74 MP	79 MP	H d & 7 8 7	Σ   00  00  00  00  00  00  00  00  00 



TABLE 16 SPEED DATA

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THIS OBSERV DATE A TIME	1 1- June 1 1- June			lœi le	⋖	T PREV DATE TIME	ous of	servati arch 19	N (SPE	D REPO	T NO. 1	
NUMBER OF VEHICLES  AVE. SPEED (MPH)  SIANDARD DEVINATION  24-MPH  39-MPH  39-MPH			NINI NI I	lœi lo		I B E						
NUMBERVAIION  NUMBER OF VEHICLES  AVE. SPEED (MPH)  SIANDARD DEVIATION  24 MPH  34 MPH  39 MPH	A	1	18181 NI 1	lœi id						• •		
NUMBER OF VAILON  NUMBER OF VEHICLES  AVE. SPEED (MPH)  SIANDARD DEVINATION  24 MPH  39 MPH  39 MPH  39 MPH	ALL PR 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	N N N N N N N N N N N N N N N N N N N		21 I C	1		1		110			•
NUMBER OF VAIION  AVE SPEED (MPH)  SIANDARD DEVIATION  29 MPH  34 MPH  39 MPH	LAST 00 57 00 52 2	S S - 1	HO O		ILVON		A		25000		>5000	
NUMBER OF VEHICLES  NUMBER OF VEHICLES  AVE. SPEED (MPH)  SIANDARD DEVIATION  24-MPH  34-MPH  39-MPH  39-MPH	LAST	NI 1000	T S O O		) 	PRE		PRES-	)   	PRE		
NUMBER OF VEHICLES  AVE. SPEED (MPH)  SIANDARD DEVIAIION  -24 MPH  -25 MPH  -34 MPH  -34 MPH  -34 MPH  -35 MPH  -37 MPH  -37 MPH	0 0 5 7 4 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	643			LAST	Z	LASI	ZI	LAST	21	LAST	Zi
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SIANDARD DEVIATION SIANDARD DEVIATION SYLMPH 34 MPH 39 MPH	0 0	1610	0		0		ات		0	57:18	0	9
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T OR 64 MP	9	0	0-1	0		4-1	0	9	0		0	ା
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### TABLE\_17\_SPEED DATA

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vidual Station	WE	us observation anMarch 1978			٦		0 71	55.0	0 6.043		0	0		3	16	43.	6	93.		66	0	0	100-	
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STATIONZLALL	NO. OF LANES	THIS OBSERVATION DATE_ADLI				OBSERVATION	NUMBER OF VEHICLES	AVE. SPEED (MPH)	STANDARD DEVIATIO	24 MP	20	4	39 MP	ERCENT 44 M	dæ 67	HICLES 54 MP	ELING 59 MP	0R 64 M	SS THAN 69 MP	74 BP	E	8 4 M	89 BP	

TABLE\_18\_SPEED DATA

		RT NO.104.)		>5000_LBS.	PRES	ZI 	21	0	-60		-0 <u>0</u>	-6	0	•}	4	Ö	7.	اب ا	0	100.	<u> 100                                   </u>	0-150-0-	-100-
ns	WEATHER	ON (SPEED REPOR	RUCKS	000	PRE		-	0 58.43		0	0	0	0	9 0	03_7	_	01		•l ∞i	싆	싆	0-100-0-	ان
ividual Station	- S	JanMarch 197			PRE	3	37	0.58.01	62-7	0	0	C	0	- :		91	4	2	<del>ا</del> ه	900	00	190	00
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an Loci	F SURFACE		GER	INDIANA	PR	Z1 WI I	77	0 59.26	4.66			i	0	<u> </u>	0	0 12 1	0 55.3	0 87.9	1	0	0	0 100 0	$\bigcirc$
HIGHWAY Urb	TYPE 0	ril-June 1978	/d			Z	0 52	0 59.07	4.65		(		0	0		0 13	0 56.	0 88	0 98	66	0	00	-0
STATIONUIALL	NO. OF LANES	THIS OBSERVA DATE_AP		***************************************		OBSERVATION	NUMBER OF VEHIC	AVE. SPEED (MPH)	TANDARD DEVIAT	HJW 72	29 MP	34 MP	391	ERCENT 44 MP	JM 65	EHICLES 54 MP	LING 59 MP	T OR 64 MP	ESS THAN 69 M	74 MP	P P	84_MP	89_MP

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TABLE\_\_19\_SPEED DATA



Table 20 Monitoring of Speed (Statistical Summary) X Quarterly Report--Calendar Quarter Ending June 30, 1978

5

☐ Annual Report--Year Ending

STATE Indiana

	M 1 9 5	Number of	Number of	Duration of Measurement	Average	Median	85th Percentile	Per	Percent of Antorists Exceeding	eding
		Monitor Locations	Vehicles Measured	Session (Hours)	Speed (MPH)	Speed (!TH)	Speed (MPH)	55 ਮੁਕੂਮ	. 60 Ж <b>е</b> н	65 MPH
Interstate Urban	218	2	894	2.5	58.6	58.0	62.7	78	33	7
Interstate Rural	849	4	1836	6.5	60.2	59.4	64.7	85	45	14
Multi-lane, Divided	657	4	1782	11.4	57.6	57.2	62.4	67	28.	9
Multi-lane, Undivided		(Included		in multi-lane, divided classification)	ed class	ficatio	n)			
2-Lane, Rural	8030	4	1760	10.3	56.1	55.5	61.2	54	20	9
State Total	9754	14	6272	30.7	58.1	57.6	62.9	70	31	∞

#### TABLE\_21\_

## SPEED MONITORING STATION SUMMARY

HIGHWAY	CATEGO	JR Y	INTERST	HIGHWAY CATEGORYINTERSTATE2_RURAL	
STATION	NUMBER	7_RI=6	LOCATI	STATION NUMBER_RI-6LOCATION_See Note at Bottom of Table	
NUMBER (	)F SES	SIONS	1_DATES_	NUMBER OF SESSIONS_1_DATES_6-6-78VEHICLES MEASURED_471_	ED_471
AVERAGE SPEED (MPH) _60_1_	SPEED	(MPH)	-60-1	STANDARD DEVIATION 4.6	
MEDIAN SPEED (MPH) _59_3_	SPEED	(MPH)	59-3	85TH PERCENTILE SPEED (MPH) _64_5_	H) _64.5_
PERCENTAGE OF VEHICLES EXCEEDING:	AGE OF	V EH I C	LES EXCE	EDING:	

Note: Due to construction work, moved location to 1.65 mi. south of U.S. 31A - Jonesville-Seymour Interchange on I-65.

\_\_\_\_422\_\_\_65 MPH \_\_\_

HAW 097778

55 MPH

#### TABLE 22

## SPEED MONITORING STATION SUMMARY

SB - due to construction, moved location to 3.8 mi. north of S.R. 18 interchange on I-69. NB - regular location 1.6 mi. south of S.R. 18 interchange on I-69.

55 MPH \_\_\_\_86\_\_\_60 MPH \_\_\_\_49\_\_\_65 MPH \_\_



# SPEED MONITORING STATION SUMMARY

HIGHWAY CATEGORYINTERSTATE _ RURAL_	AIE LRURAL
STATION NUMBER_RI-13_LOCATIO	STATION NUMBER_RI-13_LOCATION_I-70, 25 mi. east of Vigo-Clay Co. Line
NUMBER OF SESSIONS_1_DATES_5	NUMBER OF SESSIONS_1_DATES_5-16-78VEHICLES MEASURED_457
AVERAGE SPEED (MPH) _59.9_	STANDARD DEVIATION _5.3_
MEDIAN SPEED (MPH) _59.2_	MEDIAN SPEED (MPH) _59.2_ 85TH PERCENTILE SPEED (MPH) _64.5_
PERCENTAGE OF VEHICLES EXCEEDING:	ED I NG:

55 MPH \_\_\_\_\_83\_\_\_\_60 MPH \_\_\_\_\_44\_\_\_\_65 MPH

HIGHWAY CATEGORYINTERSTATE LRURAL	NUMBER OF SESSIONS 1 DATES 5-17-78 VEHICLES MEASURED 459	AVERAGE SPEED (MPH) _ 52.2_ STANDARD DEVIATION _4.Z_	MEDIAN SPEED (MPH) _59_3_ 85TH PERCENTILE SPEED (MPH) _63_9_	DEBCENTAGE OF VEHICLES EXTERNING:
-----------------------------------	--	--	--	-----------------------------------

55 MPH \_\_\_\_\_84\_\_\_60 MPH \_\_\_\_43\_\_\_65 MPH \_\_\_\_

STATION NUMBER 41-17 LOCATION U.S. 52, 150' east of Co. Rd. 475W, near Klondike HIGHWAY CATEGORY\_\_\_\_MULII-LANEZ\_DIVIDED\_(RURAL)\_\_\_\_\_\_\_\_ MEDIAN SPEED (MPH) \_56.2\_ 85TH PERCENTILE SPEED (MPH) \_62.0\_ NUMBER OF SESSIONS\_1\_DATES\_5-10-78\_\_\_\_VEHICLES MEASURED\_434\_\_ AVERAGE SPEED (MPH) \_56.9\_ STANDARD DEVIATION \_5.9\_ PERCENTAGE OF VEHICLES EXCEEDING:

55 MPH \_\_\_\_62\_\_\_60 MPH \_\_\_\_24\_\_\_65 MPH \_\_\_



STATION NUMBER 41-32 LOCATION U.S. 30, 2.9 mi. west of Wanatah City Limit Sign HIGHWAY CATEGORY\_\_\_\_MULII-LANE, DIVIDED\_(RURAL)\_\_\_\_\_\_\_\_ MEDIAN SPEED (MPH) \_58\_2\_ 85TH PERCENTILE SPEED (MPH) \_62\_8\_ NUMBER OF SESSIONS 1 DATES \_\_ 5-19-78 \_\_ VEHICLES MEASURED \_452\_\_ STANDARD DEVIATION \_428\_ PERCENTAGE OF VEHICLES EXCEEDING: AVERAGE SPEED (MPH) \_58\_6\_

55 MPH \_\_\_\_\_25\_\_\_60 MPH \_\_\_\_34\_\_\_65 MPH



#### TABLE\_2Z\_

#### SPEED MONITORING STATION SUMMARY

MEDIAN SPEED (MPH) \_55.6\_ 85TH PERCENTILE SPEED (MPH) \_61.7\_ NUMBER OF SESSIONS 1 DATES 6-5-78/6-6-78 VEHICLES MEASURED 459STATION NUMBER 41-14-LOCATION U.S. 40, 2.3 mi. east of Greenfield STANDARD DEVIATION \_6.0\_ HIGHWAY CATEGORY\_\_\_\_MULII\_LANE\_\_DIVIDED\_(RURAL)\_\_\_\_\_ PERCENTAGE OF VEHICLES EXCEEDING: AVERAGE SPEED (MPH) \_56.3\_

55 MPH \_\_\_\_\_60 MPH \_\_\_\_\_65 MPH \_\_\_\_

HIGHWAY CATEGORYMULTITLANEZ_DIVIDED_(RURAL).	ANE Z DIVIDED (RURAL)
STATION NUMBER 44-31-LOCATI	STATION NUMBER 41-31 LOCATION U.S. 30, 2.45 mi. east of S.R. 421
NUMBER OF SESSIONS_1_DATES_	NUMBER OF SESSIONS_1_DATES_5-24-78VEHICLES MEASURED_437
AVERAGE SPEED (MPH) _58.7_	STANDARD DEVIATION _428_
MEDIAN SPEED (MPH) 58.4	85TH PERCENTILE SPEED (MPH) _62_8_
PERCENTAGE OF VEHICLES EXCEEDING:	EDING:

55 MPH \_\_\_\_\_\_\_B\_\_\_\_ HPH \_\_\_\_\_33\_\_\_\_65 MPH \_\_\_\_\_\_

HIGHWAY CATEGORYIWG=LANEZ_RURAL_	YEL RURAL
STATION NUMBER_21=18_LOCAT	STATION NUMBER_21=18_LOCATION_U.S. 35, 2.5 mi. east of I-69
NUMBER OF SESSIONS_1_DATES	NUMBER OF SESSIONS_1_DATES_5-11-78VEHICLES MEASURED_437
AVERAGE SPEED (MPH) _56.2_	STANDARD DEVIATION _6.0_
MEDIAN SPEED (MPH) 55.5	MEDIAN SPEED (MPH) _55.5_ 85TH PERCENTILE SPEED (MPH) _61.4_
PERCENTAGE OF VEHICLES EXCEEDING:	E E D I N G:

55 MPH \_\_\_\_\_55\_\_\_\_60 MPH \_\_\_\_\_19\_\_\_65 MPH \_\_\_\_\_7



HIGHWAY CATEGORYIWO_LANERURAL_STATION NUMBER_ZL_54_LOCATION_U.S23] NUMBER OF SESSIONS_1_DATES_5=11-78 AVERAGE SPEED (MPH) _56_8_ STANDALMEDIAN SPEED (MPH) _56_3_ 85TH PER	HIGHWAY CATEGORYIWO-LANERURAL
STATION NUMBER 2L=54_LOCATI	ON U.S. 231, 1.1 mi. south of S.R. 234 5-11-78 VEHICLES MEASURED 430
AVERAGE SPEED (MPH) _56_8_	STANDARD DEVIATION _5±8_
MEDIAN SPEED (MPH) _5623_	85TH PERCENTILE SPEED (MPH) _61_4_
PERCENTAGE OF VEHICLES EXCEEDING:	EDING:

55 MPH \_\_\_\_\_62\_\_\_60 MPH \_\_\_\_23\_\_\_65 MPH \_\_\_\_6=\_\_

TABLE\_31\_

# SPEED MONITORING STATION SUMMARY

AVERAGE SPEED (MPH)	HIGHWAY CATEGORYIWO=LANEZ_RURALSTATION NUMBER_2L=30_LOCATION_U.S. 52,  NUMBER OF SESSIONS_1_DATES_5-18-78  AVERAGE SPEED (MPH) _55_3 STANDARI  MEDIAN SPEED (MPH) _54_8 85TH PERCE
ED II 86 :-	PERCENTAGE OF VEHICLES EXCEEDING:
85TH PERCENTILE SPEEC (MPH) _61_1_	MEDIAN SPEED (MPH) _54.8_
STANDARD DEVIATION _625_	AVERAGE SPEED (MPH) _5523_
5-18-78 VEHICLES MEASURED 443	NUMBER OF SESSIONS_1_DATES_
on U.S. 52, 1.2 mi. east of New Palestine	STATION NUMBER_2L=30_LOCATI
	HIGHWAY CATEGORYIWO_LAN

55 MPH \_\_\_\_\_\_68\_\_\_\_60 MPH \_\_\_\_\_19\_\_\_\_65 MPH

HIGHWAY CATEGORY TWO-LANEZ RURAL	E. RURAL
STATION NUMBER_21=46_LOCATI	STATION NUMBER_21_46_LOCATION_U.S. 421, 3.35 mi. north of Toll Road_
NUMBER OF SESSIONS_1_DATES_	NUMBER OF SESSIONS 1 DATES 5-25-78 VEHICLES MEASURED 450
AVERAGE SPEED (MPH) _56_0_	STANDARD DEVIATION _5.3_
MEDIAN SPEED (MPH) _55_3_	MEDIAN SPEED (MPH) _25_3_ 85TH PERCENTILE SPEED (MPH) _60_8_
PERCENTAGE OF VEHICLES EXCEEDING:	ED I NG:

55 MPH \_\_\_\_\_53\_\_\_\_60 MPH \_\_\_\_19\_\_\_\_65 MPH \_\_\_\_5\_\_\_



HIGHWAY CATEGORY INTERSTALE, URBAN STATION NUMBER OF SESSIONS 1 DATES 5-31-78 VEHICLES MEASURED 442 AVERAGE SPEED (MPH) 58.8 STANDARD DEVIATION 4.7	MEDIAN SPEED (MPH) <u>158.2</u> 85TH PERCENTILE SPEED (MPH) <u>62.6</u> Percentage of Vehicles exceeding:
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55 MPH \_\_\_\_\_60 mPH \_\_\_\_\_65 MPH

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HIGHWAY CATEGORYINTERSTATE/LURBAN	STATION NUMBER_UI-4_LOCATION_I-465, 1.5 mi. east of MunnRoad	NUMBER OF SESSIONS_1_DATES_5-31-78VEHICLES MEASURED_447	AVERAGE SPEED (MPH) _58.5_ STANDARD DEVIATION _4.7_	MEDIAN SPEED (MPH)52.8_ 85TH PERCENTILE SPEED (MPH)62.7_	PERCENTAGE OF VEHICLES EXCEEDING:
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\_\_\_\_\_55\_\_\_\_60 MPH \_\_\_\_\_32\_\_\_\_65 MPH SS MPH

